UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,031	10/23/2001	Rainer Friedrich Prosi	N81463/LPK	3976

1333 7590 03/13/2007

PATENT LEGAL STAFF
EASTMAN KODAK COMPANY
343 STATE STREET
ROCHESTER, NY 14650-2201

EXAMINER	
MILIA, MARK R	
ART UNIT	PAPER NUMBER
2625	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/046,031	PROSI, RAINER FRIEDRICH	
	Examiner	Art Unit	
	Mark R. Milia	2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 December 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Applicant's amendment was received on 12/8/06 and has been entered and made of record. Currently, claims 1-36 are pending.

Response to Arguments

2. Applicant's arguments filed 12/8/06 have been fully considered but they are not persuasive.

The applicant asserts that the reference of Parker (US 6441919) does not teach or suggest outlining recurring image elements, or portions thereof, and outlining variable image elements, or portions thereof, the outlining forming element intersection areas, as required by claim 1. The examiner respectfully disagrees as Parker does teach or suggest such features either implicitly or explicitly. Particularly, Parker discloses a PDF file that contains reference areas in which objects (images) will be placed (painted). It is known in the art that PDF provides operators for preprocessing images, by transforming or clipping, (PDF Reference Manual page 293, 13.1) and that reference area locations, that is, the area in which an object is to be placed, are described by rectangles or bounding boxes (PDF Reference Manual page 137, 7.1). Parker further discloses that combining two objects to create a single object utilizes a pixelmap and a mask. The

mask is a bitmap with dimensions of the pixelmap and the pixelmap identifies which pixels are transparent. Therefore the objects can be seen to be outlined because the overlapping areas (pixels) are known and the size (dimensions) of the objects (pixelmaps) are known and thus the intersecting areas, transparent or non-transparent pixels, are known and all of the above is utilized to create a single object that will be painted into the PDF file as appropriate (see column 7 lines 15-32 and column 8 lines 32-67).

Therefore, Parker still anticipates claim 1, and similar claims 13 and 22, and the rejection, as cited in the previous Office Action, is maintained and repeated in this Office Action.

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1-27 and 30-36 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6441919 to Parker et al.

Regarding claim 1, Parker discloses a method for one pass assembly in raster image processing of image elements using memory the method comprising the steps of: forming a plurality of lists from image elements within a job file, the plurality of lists including at least a first list for recurring image elements, and at least a second list for variable image elements (see column 4 lines 42-45, column 6 lines 41-49, and column 7

lines 41-46), storing the recurring image elements of the first list in rasterized form (see Figs. 1 and 2, column 1 lines 62-64, column 5 lines 1-22, column 6 lines 41-62, and column 7 lines 15-25), storing the variable image elements of the second list in non-rasterized form (see Figs. 1 and 2, column 2 lines 2-4, column 6 lines 41-49, column 7 lines 41-46, and column 7 line 53-column 8 lines 17), identifying placement within at least one memory area of the recurring image elements and the variable image elements, wherein the identifying step includes outlining recurring image elements, or portions thereof, from the first list and outlining variable image elements, or portions thereof, from the second list in the at least one memory area, the outlining forming element intersection areas (see Fig. 1, column 5 lines 1-22, column 6 lines 41-49, column 7 lines 15-32, and column 8 lines 32-41), inserting into at least some of the intersection areas of the at least one memory area, stored recurring image elements, or portions thereof, from the first list (see column 7 line 53-column 8 line 17), and raster image processing (RIPping) at least some of the intersection areas of the at least one memory area with stored variable image elements from the second list (see column 7 line 41-column 8 line 23).

Regarding claim 13, Parker discloses a raster image processing system for creating personalized prints comprising: a print engine that receives digital data to create prints (see Fig. 1 "14" and column 5 lines 18-22), an input area for receiving a pre-authored job file (see Fig. 1 "26"), a storage system including a first memory area and a second memory area (see Fig. 1 "28a-28n"), a processing means coupled to the print engine, the storage system, and the input area, for forming and storing a plurality

of lists from image elements within the pre-authored job file, the plurality of lists including a first list of recurring image elements and a second list of variable image elements, the recurring image elements of the-first list being stored in rasterized form in the first memory area, and the variable image elements of the second list being stored in non-rasterized form in the second memory area (see column 4 lines 42-45, column 6 lines 41-49, and column 7 lines 41-46), a third memory area within the storage system, the third memory area being at least (a) initialized by having recurring image elements of the first list and variable image elements of the second list outlined in the third memory area, thereby forming intersection areas, (b) written to in at least some of the intersection areas with image elements, or portions thereof, from the list of recurring image elements, and (c) raster image processed in at least some of the intersection areas using image elements, or portions thereof, from the list of variable image elements, wherein placement of the image elements in the third memory area is arranged in accordance with image element placement within the pre-authored job file (see Fig. 1, column 5 lines 1-47, column 6 lines 41-49, column 7 lines 15-32, and column 8 lines 32-41, reference shows a number of memory areas used for storing image elements), and a memory output device that allows contents of the rasterized third memory area to be output to the print engine (see Fig. 1 and column 5 lines 1-47).

Regarding claim 22, Parker discloses a method for raster assembly, the method comprising the steps of: forming a plurality of lists from image elements within a job file including at least a first list for recurring image elements, and at least a second list for variable image elements (see column 4 lines 42-45, column 6 lines 41-49, and column 7

lines 41-46), identifying placement, as indicated in the job file, of the recurring image elements and the variable image elements in at least one memory area, wherein the identifying step includes outlining recurring image elements, or portions thereof, from the first list and outlining variable image elements, or portions thereof, from the second list in the at least one memory area, the outlining forming element intersection areas (see Figs. 1 and 2, column 1 lines 62-64, column 2 lines 2-4, column 5 lines 1-22, column 6 lines 41-62, column 7 lines 15-32, and column 8 lines 32-41), inserting into at least some of the intersection areas of the at least one memory area, the recurring image elements, or portions thereof, and the variable image elements, or portions thereof, in accordance with results from the identifying step (see column 7 line 53-column 8 line 17), and raster image processing (RIPping) the at least one memory area subsequent to the inserting step (see column 7 line 41-column 8 line 23).

Regarding claim 2, Parker further discloses the step of placing additional recurring image elements in the at least one memory area after the step of raster image processing (see Figs. 1 and 2 and column 7 lines 15-25).

Regarding claim 3, Parker further discloses wherein the step of placing further comprises placing recurring image elements that have no variable image elements below them on a stack of image layers (see Figs. 1 and 2 and column 7 lines 15-25).

Regarding claims 4 and 16, Parker further discloses wherein the step of forming further comprises forming the first list with recurring image elements that do not have

any variable image elements below them on a stack of image layers (see column 4 lines 42-45, column 6 lines 41-63, and column 7 lines 15-25).

Regarding claim 5, Parker further discloses wherein the step of forming further comprises forming the second list from variable image elements that are not recurring and from recurring image elements that have variable image elements below them on a stack of image layers (see column 7 line 15-column 8 line 23).

Regarding claim 6, Parker further discloses wherein the step of forming further comprises forming the second list from variable image elements that are not recurring and from recurring elements that have variable image elements both below them on a stack of image lavers and above them on the stack of image layers (see Figs. 1 and 2, column 1 line 62-column 2 line 4, column 4 line 42-50, and column 7 line 15-column 8 line 23).

Regarding claims 7 and 20, Parker further discloses wherein the step of identifying further comprises locating overlapping areas between image elements (see column 8 lines 32-66).

Regarding claim 8, Parker further discloses wherein the step of identifying further comprises identifying clip regions for calculating overlapping areas between image elements (see column 8 lines 32-66).

Regarding claim 9, Parker further discloses wherein the step of identifying further comprises identifying clip regions that are non-rectangular to calculate overlapping areas (see column 8 lines 32-66).

Regarding claim 10, Parker further discloses wherein the step of identifying further comprises employing information from the job file to locate overlapping areas between image elements (see column 8 lines 32-66).

Regarding claim 11, Parker further discloses wherein the step of RIPping further comprises RIPping image elements from the second list into the at least one memory area in accordance with overlapping areas designated by the identifying step and image element placement within the job file (see column 8 lines 32-66).

Regarding claims 12 and 15, Parker further discloses the step of interpreting mark up language and page description language with the job file (see column 1 lines 27-40, column 6 lines 9-63, and column 7 line 15-column 8 line 23).

Regarding claim 14, Parker further discloses wherein the plurality of lists further include a third list of recurring image elements that have variable image elements below them on a stack of image layers, the third list of recurring image elements being stored in the storage system in rasterized form and placed in the third memory area on top of the variable image elements in the stack of image layers in accordance with image element placement within the pre-authored job file (see Fig. 1 and column 7 line 15-column 8 line 23).

Regarding claim 17, Parker further discloses wherein the list of variable image elements further comprises recurring image elements that have variable image elements above them on a stack of image lavers and below them on the stack of image layers (see column 4 lines 42-50, column 6 lines 22-63, and column 7 line 15-column 8 line 23).

Regarding claim 18, Parker further discloses wherein the third memory area further comprises a plurality of memory bands (see column 9 lines 59-65).

Regarding claim 19, Parker further discloses wherein one of the memory bands is being initialized and RIPped with data from the pre-authored job file while another memory band is having its contents sent to the print engine by the memory output device (see Fig. 1, column 4 lines 27-50, column 5 lines 1-22, and column 8 lines 18-23).

Regarding claim 21, Parker further discloses wherein the third memory area further comprises a plurality of memory tiles (see column 5 lines 23-47).

Regarding claim 23, Parker further discloses wherein the step of RIPping further comprises prerasterizing all the image elements allowing the memory areas to be used as a raster assembly tool (see column 7 line 15-column line 23).

Regarding claim 24, Parker further discloses wherein the step of RIPping allows one pass assembly and RIP processing of rasterized image elements and PDL elements using banded memory (see column 7 line 15-column 8 line 23 and column 9 lines 59-65).

Regarding claim 25, Parker further discloses wherein the step of identifying further comprises locating overlapping areas between image elements (see column 8 lines 32-66).

Regarding claim 26, Parker further discloses wherein the step of identifying placement further comprises placing image elements that contain transparent pixels (see column 2 lines 16-19 and column 8 line 66-column 9 line 3).

Regarding claim 27, Parker further discloses wherein the step of forming further comprises adding image masks to recurring image elements (see column 7 lines 15-32).

Regarding claim 30, Parker further discloses the step of storing image elements in a raster-equivalent graphics state that allows the image elements to be reused and rotated (see column 1 line 62-column 2 line 4, column 4 lines 42-50, and column 7 line 15-column 8 line 23).

Regarding claim 31, Parker further discloses wherein the step of forming includes forming the first list with recurring image elements having no variable image elements below them on an image stack and forming the second list with variable image elements that are not prerasterized, the forming step further comprising the steps of: forming a third list having recurring image elements that have variable image elements above them on the image stack and below them on the image stack (see Figs. 1 and 2 and column 5 lines 1-47) , presetting the memory area with image elements from the second list (see Figs. 1 and 2, column 5 lines 1-47, and column 7 line 15-column 8 line 23), and RIPping the image elements of the third list and placing the RIPped image elements of the third list elements into the memory area (see Figs. 1 and 2, column 5 lines 1-47, and column 7 line 15-column 8 line 23).

Regarding claim 32, Parker further discloses wherein the step of forming further comprises forming (a) a third list containing image elements that either are not prerasterized or image elements that are rasterized and must be subsequently RIPped due to a layering consideration, and (b) a fourth list containing image elements that are

recurring but have variable image elements beneath them on an image stack (see column 5 lines 1-47, column 9 lines 4-58, and column 9 line 65-column 10 line 31).

Regarding claim 33, Parker further discloses wherein, following the step of forming is a step of prerasterizing recurring image elements from the first list (see column 6 lines 41-62).

Regarding claim 34, Parker further discloses wherein the step of initializing further comprises presetting the memory areas with image elements from the second list (see Fig. 1 and column 7 line 41-column 8 line 3).

Regarding claim 35, Parker further discloses wherein the step of RIPping further comprises RIPping the image elements from the third list (see column 5 lines 1-47 and column 8 lines 9-17).

Regarding claim 36, Parker further discloses the step for applying the image elements from the fourth list to the memory area (see column 5 lines 1-47 and column 8 lines 9-17).

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Parker as applied to claim 22 above, and further in view of Notredame (US 6049390).

Regarding claim 28, Parker discloses the step of RIPping image elements (see column 1 lines 15-26 and column 7 lines 15-25).

Parker does not disclose expressly wherein the step of RIPping further comprises RIPping image elements on distributed computers.

Notredame discloses wherein the step of RIPping further comprises RIPping image elements on distributed computers (see Fig. 10 and column 9 lines 49-53).

Regarding claim 29, Parker does not disclose expressly following the step of forming, storing the rasterized version of recurring image elements in either a lossy or losslessly compressed mode.

Notredame discloses storing the rasterized version of recurring image elements in either a lossy or losslessly compressed mode (see column 11 lines 22 and 35-38).

Parker & Notredame are combinable because they are from the same field of endeavor, merging of page elements to produce a composite printed document.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the RIPping of image elements on distributed computers and the storing of the rasterized version of image elements in a compressed mode, as described by Notredame, with the system of Parker.

The suggestion/motivation for doing so would have been to reduce the processing time and strain on the printer device and decrease the amount of memory needed to store image elements.

Therefore, it would have been obvious to combine Notredame with Parker to obtain the invention as specified in claims 28 and 29.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark R. Milia whose telephone number is (571) 272-7408. The examiner can normally be reached M-F 8:00am-4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler M. Lamb can be reached at (571) 272-7406. The fax number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark R. Milia
Examiner
Art Unit 2625

MRM

TWYLER LAMB
SUPERVISORY PATENT EXAMINER